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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,242	12/22/2004	Yasushi Akiyama	2002JP311	2936
26289 7590 06/14/2007 AZ ELECTRONIC MATERIALS USA CORP. ATTENTION: INDUSTRIAL PROPERTY DEPT. 70 MEISTER AVENUE SOMERVILLE, NJ 08876			EXAMINER WU, IVES J	
			ART UNIT 1724	PAPER NUMBER
			MAIL DATE 06/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,242

Applicant(s)

AKIYAMA ET AL.

Examiner

Ives Wu

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-2,4-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

- (1). Applicants' Amendments and Remarks filed on 04/24/2007 have been received.
Claims 1 and 12 are amended. Claim 3 is cancelled.
The rejection of claim 3 in prior Office Action dated 02/14/2007 is removed accordingly.
A new ground of rejection for claims 1-2 and 4-12 is introduced in the following.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

- (2). **Claims 1-2, 4-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun (JP 2001-133984) in view of Mineo et al (JP 08-044066), evidenced by Toshisuke et al (JP 11-124531).

As to an anti-reflective coating composition comprising a fluorine-containing polymer with a unit represented as $-\text{CF}_2\text{CF}(\text{OR}_1\text{COOH})-$ in **independent claim 1** and a polymer unit represented by $-\text{CF}_2\text{CFX}-$ in **claim 2**, Jun (JP 2001-133984) discloses, by using the light reflex prevention film containing the perfluoro compound which contains especially fluorination alkylamine or alkanolamine as a counter cation ([0017], line 3-4), the antireflective film material shown in the formula (7) where M is amine salt ([0022]) which includes $-\text{COOH.amine}$ as evidenced by Toshisuke et al (JP 11-124531) - Abstract.

As to the components of an acid, an amine and an aqueous solvent capable of dissolving these components in an antireflective coating composition in **independent claim 1**, an amine of alkylamine or alkanolamine in **claim 4**, aqueous solvent to be water in **claim 5**, Jun discloses, the water soluble antireflection film ingredient characterized by including alkylamine or alkanolamine ([0018], line 5-6), the antireflective-film ingredient carries out 0-300 wt% of various kinds of polymers for example, polyacrylic acid, polymethacrylic acid ([0028], line 1-2). in addition, pure water can be used as a diluent in the water-soluble antireflection film ([0035], line 1).

As to the acid selection in **independent claim 1**, Jun (JP 2001-133984) **does not teach** the acid selected from the group as claimed.

However, Mineo et al (JP 08-044066) **teach** the water used for the constituent as a solvent, the aqueous mixed solvent of the organic solvent and water such as low-grade alkyl carboxylic acid such as acetic acid ([0022]).

The advantage of using organic solvent such as mixture of acetic acid with water is to raise the solubility of a fluorine compound ([0022], line 1-2).

Therefore, it would be obvious at time of the invention to include the low-grade alkyl carboxylic acid as taught by Mineo et al (JP 08-044066) in the aqueous composition of Jun in order to obtain the above-mentioned advantage.

As to the pH of antireflection coating to be 1.0 to 6.0 in **independent claim 1** and **claim 9**, 1.0 to 4.0 in **claim 7** and **claim 10**, 1.6 to 2.6 in **claim 8** and **claim 11**, in view of substantially identical antireflection coating composition disclosed by Jun, and by applicants, it is examiner's position to believe that the composition of prior art Jun (JP 2001-133984) would inherently possess the pH values as claimed. The burden now is shifted to the applicants to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to limitation of **claim 6**, Jun discloses prebaking the two layers together ([0034]).

(3). **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun (JP 2001-133984) in view of McGinness et al (US20040023156A1).

As to dodecyl-benzene sulfonic acid in **claim 12**, Jun (2001-133984) **does not teach** the use of dodecylbenzenesulfonic acid as claimed.

However, McGinness et al (US20040023156A1) teach antireflective coating composition including a polyester (Abstract, line 1). The branched polyesters are based on multifunctional acids or alcohols and other polyesters that are nonlinear in their nature ([0023]). One can add a catalyst selected from dodecylbenzenesulfonic acid, its amine salt or from an amine salt of an aromatic sulfonic ester ([0029], line 9-12).

The advantage of using dodecylbenzene sulfonic acid is to complete the reaction as catalyst ([0036], line 7-8).

Therefore, it would be obvious at time of the invention to include the dodecyl benzene sulfonic acid as taught by McGinness et al (US20040023156A1) in the aqueous composition of Jun in order to obtain the above-mentioned advantage.

Response to Arguments

Applicant's arguments with respect to claims 1, 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/519,242

Page 5

Art Unit: 1724

Examiner: Ives Wu

Art Unit: 1724

Date: June 11, 2007

DUANE SMITH
PRIMARY EXAMINER

D-S
6-11-07